

REMARKS

Reconsideration of the Application in view of the following remarks is respectfully requested.

Claims 1, 2, 4-7, 9, 10 and 12-14 are pending in the application.

Request for Reconsideration of the Finality of the Rejection

Applicants request reconsideration of the finality of the rejection of the last Office Action. The Examiner has rejected claims 1, 2, 4-7, 9, 10 and 12-14 under U.S.C. 103(a) as unpatentable over U.S. Patent No. 6,419,810 to Tanaka et al (“Tanaka”) in view of the Examiner’s statement of common knowledge. In accordance with MPEP § 2144.03(b) the Applicant is “allowed to challenge the assertion in the next reply after the Office action in which common the common knowledge statement was made.” Accordingly, Applicants submit that the rejection presented in the Office Action dated December 7, 2005 should not be final so that the Applicants may challenge the assertion as set forth below.

Rejections Under 35 U.S.C. § 103

Claims 1, 2, 4-7, 9, 10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,419,810 to Tanaka et al (“Tanaka”) in view of the Examiner’s statement modifying Tanaka. Applicants respectfully traverse the rejection.

With respect to independent claims 1, 4 and 9, the Examiner states that Tanaka discloses most of the claimed features. The Examiner acknowledges that Tanaka does not disclose "a line having electrical insulating material on the outer surface wherein said insulating material is integrally embedded in the electroformed element." (Detailed Action, page 4) The Examiner states that Tanaka discloses the use of plastic wires made of nylon, polyester, or Teflon, and contends that

a person of ordinary skill in the art at the time of the invention would know to modify Tanaka to achieve the invention of claims 1, 4 and 9.

In support of this contention the Examiner cites Tanaka, column 9, lines 52-63, which discloses wire members 9 can include metal wires and plastic wires. For plastic wires, Tanaka discloses:

it is necessary to apply electroless plating based on, for example, nickel or silver, in order to give conductivity to the surface. It is advantageous to use conductive plastic. In this case, when the electric power is applied to the conductive plastic to heat it after the electroforming, the extracting mold release is easily performed for the electroformed product.

(Emphasis added.)

Relying on MPEP § 2144.04, the Examiner contends that Tanaka's disclosure could be modified to omit applying the electroless plating on the plastic wire, "since omission of an element and its function is obvious if the function of the element is not desired." (Detailed Action, page 5.) Applicants respectfully submit that the Examiner's modification of Tanaka is not in accordance with MPEP § 22144.04.

As noted by the Examiner on page 4 of the Detailed Action, Tanaka clearly discloses that when metal wires are substituted with plastic wires "it is necessary to apply electroless plating based on, for example, nickel or silver, in order to give conductivity to the surface." (Tanaka, column 9, lines 57-59.) Without this conductive plating it will not be possible for Tanaka to electroform the ferrule around the plastic wire. Based on Tanaka's disclosure, the omission of the electroless plating frustrates the purpose of Tanaka, and results in a non-functioning process.

MPEP § 2144.04 permits omission of an element where "the function attributed to such [element] is not desired or required." (MPEP § 2144.04 II.A, page 2100-145, rev.3 August 2005.) Because Tanaka discloses that applying electroless plating to the plastic wire is **necessary**, this is a

desirable and required element. Thus, modifying Tanaka as suggested by the Examiner is impermissible.

Additionally, Tanaka discloses that the wire members 9 are connected to a cathode 8, such that material is electroformed on the surface of the wire members. One of ordinary skill in the art at the time of the invention would know that a conductive outer surface is required in order for material to electroform on the surface of the wire members. Thus, Tanaka teaches away from claims 1, 4 and 9 which recite a “dummy line including electrical insulating material on at least an outer surface thereof.” Therefore, a person of ordinary skill in the art at the time of the invention would not be motivated by Tanaka to achieve the claimed invention.

With respect to the Examiner’s contention that plastics are inherently insulating, Applicants submit that conductive plastics are known, which, by definition, are not insulating. In fact, Tanaka discloses the use of conductive plastics and states that it is advantageous as noted by the Examiner. The Examiner’s contention that electroless plating is applied on the wire of Tanaka in order to form a conductive plastic wire is not supported in the record. Applicants submit that Tanaka discloses a plastic wire, which may be conductive, and that it is necessary that the plastic wire have electroless plating thereon, regardless of whether or not the plastic is conductive.

The Examiner’s statement that the electroless plating on Tanaka’s wire member 9 facilitates the extraction of the wire is without support in the record. Tanaka discloses that “when the electric power is applied to the conductive plastic to heat it after the electroforming, the extracting mold release is easily performed” (Tanaka, column 9, lines 60-63). Thus, Tanaka discloses that the conductive plastic facilitates the easy removal of the wire and not the electroless plating. The Examiner’s presumption the electroless plating facilitates the extraction of the wire is not supported by any “concrete evidence in the record” (See MPEP § 2144.04(c), citing *In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).) Accordingly, Applicants submit that the Examiner is relying on personal knowledge and respectfully request that the Examiner supports this personal knowledge with affidavits containing data as specific as possible pursuant to 37 C.F.R. §1.104(d)(2).

In accordance with § 1.104(d)(2), Applicants are permitted to contradict or explain such affidavits with affidavits of the Applicants or other persons. Applicants submit that without supporting evidence, the Examiner has impermissibly relied on personal knowledge and, thus, has not established a *prima facie* case of obviousness.

For the multiple reasons set forth above, Applicants submit that Tanaka in combination with the Examiner's modification and statements does not disclose nor suggest claims 1, 4 and 9. Therefore, the Examiner has failed to meet the burden of establishing a *prima facie* case of obviousness. Thus, claims 1, 4 and 9 are patentable over Tanaka and the Examiner's modifications and statements.

With respect to claims 2, 7 and 10, the Examiner states that Tanaka discloses the method of subjecting the wire member to a mold release treatment prior to electroforming. Claims 2, 7 and 10 depend from claims 1, 4 and 9 respectively. Applicants submit that claims 2, 7 and 10 are patentable for at least the same reasons as their respective base claims.

With respect to claims 5 and 6, the Examiner states that Tanaka discloses the use of a ferrule as a socket and an optical fiber fixedly attached to the positioning hole of a second ferrule is inserted into the positioning hole of the ferrule. The Examiner states that the difference between Tanaka and claims 5 and 6 is that Tanaka does not explicitly disclose the use of a plug pin. The Examiner contends that the optical fiber 40a as shown in Tanaka figure 20 is functionally equivalent to a plug pin. The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multiple-core type ferrule of Tanaka by replacing an optical fiber with a plug pin.

Claims 5 and 6 depend from claim 4 and are patentable for at least the same reasons as claim 4. Further, claim 5 recites that "a plug pin of a second ferrule is inserted into the positioning hole of the ferrule" and claim 6 recites "a plug pin fixedly attached to the positioning hole, wherein said plug pin is to be inserted into and fitted to a positioning hole of a second ferrule."

Thus, the plug pins are part of a ferrule and are inserted into a second ferrule to attach the two ferrules.

In contrast, Tanaka discloses a ferrule that is used as an optical fiber connector. Thus, the ferrule connects optical fibers. The optical fibers do not connect the ferrules. Further, the optical fibers are not part of the ferrules. Thus, it is unclear how an optical fiber is a functional equivalent of a plug pin, since the plug pins of the present invention are used to connect ferrules and the ferrules of Tanaka are used to connect optical fibers. Further, Tanaka does not disclose or suggest the use of plug pins as recited in claims 5 and 6. Thus, claims 5 and 6 are further patentable over Tanaka.

With respect to claims 12-14, the Examiner states that Tanaka discloses that the wires can be made of iron, aluminum, copper or an alloy thereof. The Examiner contends that metal wires inherently have a metal deposited around them.

Claims 12-14 depend from claims 1, 4 and 9 respectively and are patentable for at least the same reasons as their respective base claim. Further, claims 12-14 recite that “metal is concentrically deposited only around the negative electrode line.” In contrast Tanaka discloses a method where metal is deposited around all of the wire members 9. Claims 12-14 recite method steps for manufacturing a ferrule, such that metal is deposited on the negative electrode line. Thus, the fact that Tanaka’s wire members are metal, and inherently have metal around them is not relevant because the claim recites metal deposited around the electrode line. Tanaka does not disclose or suggest a manufacturing method “wherein metal is concentrically deposited only around the negative electrode line,” as recited in the claims. Thus claims 12-14 are further patentable over Tanaka.

Applicants respectfully request reconsideration and withdrawal of the rejection.

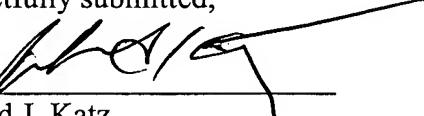
CONCLUSION

Each and every point raised in the Office Action dated December 7, 2005 has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that claims 1, 2, 4-7, 9, 10 and 12-14 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Dated: January 18, 2006

Respectfully submitted,

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